

~~SECRET~~TSSG/APSD/IEB-072/70
11 May 1970

MEMORANDUM FOR THE RECORD

SUBJECT: The Center's Need for a Sophisticated Color Analysis Station

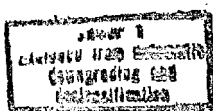
INTRODUCTION

The prominence of color photography as an exploitation medium within the Center is expanding at an ever-increasing rate. Commensurate with this increase is the necessity to accurately identify and measure color (hue, chroma, etc.) and also, when necessary, communicate (oral and written) in exact color terminology. (Everyday communication regarding intelligence targets need not specify exact colors or values of color any more than it need specify exact target spatial dimensions, however, the importance of acquiring and utilizing exact target spatial data is fully realized. Similarly, the Center must develop a capability to acquire and apply exact target color data.)

NPIC COLOR STUDY PROPOSAL

The present plan for establishing the Center's color capability is partially directed toward its physical needs. For instance, it was suggested in the NPIC Color Study [] that two Color Control Cells be established within the Center for discreet analysis of color photography. The following statements were extracted from the Color Study: "A room or cell where the photointerpreter/analyst can retreat to view color film, make judgments, and report on color oriented EEI's will be necessary. It must comply with accepted standards for using color film. A similar environmental/instrumentation cell will be incorporated in the micro-d room for the assessment of color materials. Other areas within the intelligence community where discreet color evaluations are to be made must also establish a standardized viewing and evaluation environment." Whereas this approach may be logical and necessary, it does not deal sufficiently with the heart of the Center's need relative to the precise and exact extraction of ground color data from image color data. One might also interpret the Color Study approach as suggesting that each PI be able to extract exact color data for himself. From a practical standpoint, this is impossible because of the complexity and associated expense of such a task. In addition, this

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is not the PI's function, although he must have access to the data when needed.

RECOMMENDED PLAN

The establishment of a single color station, fully equipped and staffed with experienced personnel is recommended for the Center. The principal function of the station/personnel would be to analyze, measure and report exact color characteristics of targets/areas as per request. The station personnel would work directly and conjunctively with the photo-interpreters/analysts and other PI/analyst support units (ie, photogrammetrists, photo-lab technicians, graphic arts personnel, etc.). Requesters would be provided color schematics or prints whose areas could be directly related to specific ground colors utilizing Munsell chips, CIE values, or whatever is deemed necessary. The accuracy of this data would of course depend upon the state-of-the-art of relating imaged color data to ground color data. It is most evident that the success of this approach is dependent upon access to the original material (there is only one), sophisticated equipment (viewing tables, microscopes, spectrophotometers, colorimeters, densitometers, computers), computer programs (Insite, Kaleidoscope, etc.) and qualified personnel. These are but a few of the reasons why a single sophisticated color station is the most practical solution to one of the basic color needs of the Center.

CONCLUSION

Color Photography as it relates to intelligence is indeed complicated. For the Center to realize the value of this added dimension, it must be prepared to fully evaluate color, analyze the results, and support the PI/analysts. A color station with extensive color capabilities can be of measurable assistance in providing this realization.

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Section I
Image Evaluation Branch
APSD/TSSG/NPIC

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